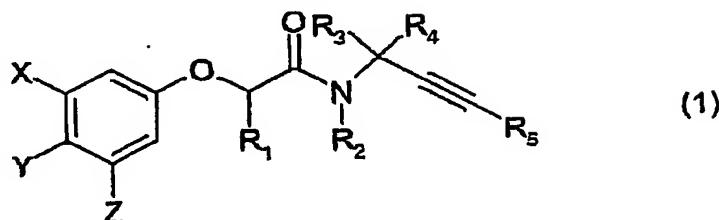


## CLAIMS

1. A compound of the general formula (1):



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wherein

X, Y and Z are independently H, halogen, C<sub>1-4</sub> alkyl, halo(C<sub>1-4</sub>)alkyl, C<sub>2-4</sub> alkenyl, halo(C<sub>2-4</sub>)alkenyl, C<sub>2-4</sub> alkynyl, halo(C<sub>2-4</sub>)alkynyl, C<sub>1-4</sub> alkoxy, halo(C<sub>1-4</sub>)alkoxy, -S(O)<sub>n</sub>(C<sub>1-4</sub>)alkyl where n is 0, 1 or 2 and the alkyl group is optionally substituted with fluoro, -OSO<sub>2</sub>(C<sub>1-4</sub>)alkyl where the alkyl group is optionally substituted with fluoro, cyano, nitro, C<sub>1-4</sub> alkoxy carbonyl, -CONRR'', -COR', -NR'COR'' or -NR'COOR'' where R' and R'' are independently H or C<sub>1-4</sub> alkyl and R''' is C<sub>1-4</sub> alkyl, provided that at least one of X and Z is other than H;

10 R<sub>1</sub> is C<sub>1-4</sub> alkyl, C<sub>2-4</sub> alkenyl or C<sub>2-4</sub> alkynyl in which the alkyl, alkenyl and alkynyl groups are optionally substituted on their terminal carbon atom with one, two or three halogen atoms, with a cyano group, with a C<sub>1-4</sub> alkyl carbonyl group, with a C<sub>1-4</sub> alkoxy carbonyl group or with a hydroxy group;

15 R<sub>2</sub> is H, C<sub>1-4</sub> alkyl, C<sub>1-4</sub> alkoxy methyl or benzyl oxymethyl in which the phenyl ring of the benzyl moiety is optionally substituted with C<sub>1-4</sub> alkoxy;

R<sub>3</sub> and R<sub>4</sub> are independently H, C<sub>1-3</sub> alkyl, C<sub>2-3</sub> alkenyl or C<sub>2-3</sub> alkynyl provided that both are not H and that when both are other than H their combined total of 20 carbon atoms does not exceed 4, or

R<sub>3</sub> and R<sub>4</sub> join with the carbon atom to which they are attached to form a 3 or 4 membered carbocyclic ring optionally containing one O, S or N atom and optionally substituted with halo or C<sub>1-4</sub> alkyl; and

25 R<sub>5</sub> is unsubstituted C<sub>3-4</sub> alkyl, unsubstituted C<sub>3-6</sub> cycloalkyl or C<sub>1-4</sub> alkyl or C<sub>3-6</sub> cycloalkyl in which the alkyl and cycloalkyl groups are substituted with halo, hydroxy, C<sub>1-6</sub> alkoxy, cyano, C<sub>1-4</sub> alkyl carbonyloxy, aminocarbonyloxy, mono- or di(C<sub>1-4</sub>)alkylaminocarbonyloxy, -S(O)<sub>n</sub>(C<sub>1-6</sub>)alkyl where n is 0, 1 or 2, triazolyl, tri(C<sub>1-4</sub>)alkylsilyloxy, optionally substituted phenoxy, optionally substituted

thienyloxy, optionally substituted benzyloxy or optionally substituted thietyl-methoxy, in which the optionally substituted phenyl and thietyl rings of phenoxy, thietylloxy, benzyloxy and thietylmethoxy are optionally substituted with one, two or three substituents selected from halo, hydroxy, mercapto, C<sub>1-4</sub> alkyl, C<sub>2-4</sub> alkenyl, C<sub>2-4</sub> alkynyl, C<sub>1-4</sub> alkoxy, C<sub>2-4</sub> alkenyloxy, C<sub>2-4</sub> alkynyloxy, halo(C<sub>1-4</sub>)-alkyl, halo(C<sub>1-4</sub>)alkoxy, C<sub>1-4</sub> alkylthio, halo(C<sub>1-4</sub>)alkylthio, hydroxy(C<sub>1-4</sub>)alkyl, C<sub>1-4</sub> alkoxy(C<sub>1-4</sub>)alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>3-6</sub> cycloalkyl(C<sub>1-4</sub>)alkyl, phenoxy, benzyloxy, benzyloxy, cyano, isocyano, thiocyanato, isothiocyanato, nitro, -NR<sup>m</sup>R<sup>n</sup>, -NHCOR<sup>m</sup>, -NHCONR<sup>m</sup>R<sup>n</sup>, -CONR<sup>m</sup>R<sup>n</sup>, -SO<sub>2</sub>R<sup>m</sup>, -OSO<sub>2</sub>R<sup>m</sup>, -COR<sup>m</sup>, -CR<sup>m</sup>=NR<sup>n</sup> or -N=CR<sup>m</sup>R<sup>n</sup>, in which R<sup>m</sup> and R<sup>n</sup> are independently hydrogen, C<sub>1-4</sub> alkyl, halo(C<sub>1-4</sub>)alkyl, C<sub>1-4</sub> alkoxy, halo(C<sub>1-4</sub>)alkoxy, C<sub>1-4</sub> alkylthio, C<sub>3-6</sub> cycloalkyl, C<sub>3-6</sub> cycloalkyl(C<sub>1-4</sub>)alkyl, phenyl or benzyl, the phenyl and benzyl groups being optionally substituted with halogen, C<sub>1-4</sub> alkyl or C<sub>1-4</sub> alkoxy, with the proviso that where X, Y, Z, R<sub>1</sub> and R<sub>2</sub> are H, R<sub>3</sub> is Me and R<sub>4</sub> is 2-methylprop-1-yl, R<sub>5</sub> is not but-2-yl.

2. A compound according to claim 1 wherein X, Y and Z are all chloro or methyl, or X and Z are both chloro or bromo and Y is H or methyl, or X and Z are both methyl or methoxy and Y is H, chloro, bromo or alkylthio, or X is methoxy, Y is H and Z is cyano or chloro, or X is methyl, Y is H and Z is ethyl, or X is chloro, bromo or trifluoromethyl and both Y and Z are H.
3. A compound according to claim 1 or 2 wherein R<sub>1</sub> is methyl, ethyl, n-propyl, 2,2,2-trifluoromethyl, cyanomethyl, acetyl methyl, methoxycarbonylmethyl, methoxycarbonylethyl, hydroxymethyl, hydroxyethyl.
4. A compound according to claim 1 or 2 wherein R<sub>1</sub> is ethyl.
5. A compound according to any one of the preceding claims wherein R<sub>2</sub> is H.
6. A compound according to any one of the preceding claims wherein both R<sub>3</sub> and R<sub>4</sub> are methyl.

7. A compound according to any one of the preceding claims wherein R<sub>5</sub> is *n*-propyl, hydroxymethyl, methoxymethyl, 1-methoxyethyl, *tert*-butyldimethylsiloxyethyl, 3-chloropropyl, 3-cyanopropyl, 3-methoxypropyl, 3-(1,2,4-triazol-1-yl)propyl, 3-methylthiopropyl, 3-methanesulphinylpropyl or 3-methanesulphonylpropyl.

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8. A compound according to claim 1 wherein

X, Y and Z are independently H, halogen, C<sub>1-4</sub> alkyl, halo(C<sub>1-4</sub>)alkyl, C<sub>2-4</sub> alkenyl, halo(C<sub>2-4</sub>)alkenyl, C<sub>2-4</sub> alkynyl, halo(C<sub>2-4</sub>)alkynyl, C<sub>1-4</sub> alkoxy, halo(C<sub>1-4</sub>)alkoxy, -S(O)<sub>n</sub>(C<sub>1-4</sub>)alkyl where n is 0, 1 or 2 and the alkyl group is optionally substituted with fluoro, -OSO<sub>2</sub>(C<sub>1-4</sub>)alkyl where the alkyl group is optionally substituted with fluoro, cyano, nitro, C<sub>1-4</sub> alkoxy carbonyl, -CONRR", -COR' or -NR'COR" where R' and R" are independently H or C<sub>1-4</sub> alkyl, provided that at least one of X and Z is other than H;

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R<sub>1</sub> is C<sub>1-4</sub> alkyl, C<sub>2-4</sub> alkenyl or C<sub>2-4</sub> alkynyl in which the alkyl, alkenyl and alkynyl groups are optionally substituted on their terminal carbon atom with one, two or three halogen atoms, with a cyano group, with a C<sub>1-4</sub> alkyl carbonyl group, with a C<sub>1-4</sub> alkoxy carbonyl group or with a hydroxy group;

R<sub>2</sub> is H, C<sub>1-4</sub> alkyl, C<sub>1-4</sub> alkoxy methyl or benzyloxy methyl in which the phenyl ring of the benzyl moiety is optionally substituted with C<sub>1-4</sub> alkoxy;

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R<sub>3</sub> and R<sub>4</sub> are independently H, C<sub>1-3</sub> alkyl, C<sub>2-3</sub> alkenyl or C<sub>2-3</sub> alkynyl provided that both are not H and that when both are other than H their combined total of carbon atoms does not exceed 4, or

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R<sub>3</sub> and R<sub>4</sub> join with the carbon atom to which they are attached to form a 3 or 4 membered carbocyclic ring optionally containing one O, S or N atom and optionally substituted with halo or C<sub>1-4</sub> alkyl; and

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R<sub>5</sub> is C<sub>1-4</sub> alkyl or C<sub>3-6</sub> cycloalkyl in which the alkyl and cycloalkyl groups are substituted with hydroxy, C<sub>1-6</sub> alkoxy, C<sub>1-6</sub> alkylthio, tri(C<sub>1-4</sub>)alkylsilyloxy, optionally substituted phenoxy, optionally substituted thienyloxy, optionally substituted benzyloxy or optionally substituted thienylmethoxy, in which the optionally substituted phenyl and thienyl rings of phenoxy, thienyloxy, benzyloxy and thienylmethoxy are optionally substituted with one, two or three substituents selected from halo, hydroxy, mercapto, C<sub>1-4</sub> alkyl, C<sub>2-4</sub> alkenyl, C<sub>2-4</sub> alkynyl, C<sub>1-4</sub> alkoxy, C<sub>2-4</sub> alkenyloxy, C<sub>2-4</sub> alkynyloxy, halo(C<sub>1-4</sub>)alkyl, halo(C<sub>1-4</sub>)alkoxy, C<sub>1-4</sub>

alkylthio, halo(C<sub>1-4</sub>)alkylthio, hydroxy(C<sub>1-4</sub>)alkyl, C<sub>1-4</sub>alkoxy(C<sub>1-4</sub>)alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>3-6</sub> cycloalkyl(C<sub>1-4</sub>)alkyl, phenoxy, benzyloxy, benzyloxy, cyano, isocyano, thiocyanato, isothiocyanato, nitro, -NR<sup>m</sup>R<sup>n</sup>, -NHCOR<sup>m</sup>, -NHCONR<sup>m</sup>R<sup>n</sup>, -CONR<sup>m</sup>R<sup>n</sup>, -SO<sub>2</sub>R<sup>m</sup>, -OSO<sub>2</sub>R<sup>m</sup>, -COR<sup>m</sup>, -CR<sup>m</sup>=NR<sup>n</sup> or -N=CR<sup>m</sup>R<sup>n</sup>, in which R<sup>m</sup> and R<sup>n</sup> are independently hydrogen, C<sub>1-4</sub> alkyl, halo(C<sub>1-4</sub>)alkyl, C<sub>1-4</sub> alkoxy, halo-(C<sub>1-4</sub>)alkoxy, C<sub>1-4</sub> alkylthio, C<sub>3-6</sub> cycloalkyl, C<sub>3-6</sub> cycloalkyl(C<sub>1-4</sub>)alkyl, phenyl or benzyl, the phenyl and benzyl groups being optionally substituted with halogen, C<sub>1-4</sub> alkyl or C<sub>1-4</sub> alkoxy.

5 10 9. A compound according to claim 1 wherein X, Y and Z are all chloro or methyl, or X and Z are both chloro or bromo and Y is H or methyl, or X and Z are both methyl or methoxy and Y is H, chloro, bromo or alkylthio, or X is methoxy, Y is H and Z is cyano or chloro, or X is methyl, Y is H and Z is ethyl, or X is chloro, bromo or trifluoromethyl and both Y and Z are H; R<sub>1</sub> is methyl, ethyl, *n*-propyl, 15 2,2,2-trifluoromethyl, cyanomethyl, acetyl methyl, methoxycarbonylmethyl, methoxycarbonylethyl, hydroxymethyl or hydroxyethyl; R<sub>2</sub> is H; R<sub>3</sub> and R<sub>4</sub> are both methyl; and R<sub>5</sub> is hydroxymethyl, methoxymethyl, 1-methoxyethyl, *tert*-butyldimethylsiloxyethyl, 3-chloropropyl, 3-cyanopropyl, 3-methoxypropyl, 3-(1,2,4-triazol-1-yl)propyl, 3-methylthiopropyl, 3-methanesulphonylpropyl or 3-methanesulphonylpropyl. Preferably R<sub>1</sub> is ethyl. Preferably R<sub>5</sub> is methoxymethyl or 3-cyanopropyl.

20 10. A fungicidal composition comprising a fungicidally effective amount of a compound of the general formula (1) wherein X, Y and Z are independently H, halogen, C<sub>1-4</sub> alkyl, halo(C<sub>1-4</sub>)alkyl, C<sub>2-4</sub> alkenyl, halo(C<sub>2-4</sub>)alkenyl, C<sub>2-4</sub> alkynyl, halo(C<sub>2-4</sub>)alkynyl, C<sub>1-4</sub> alkoxy, halo(C<sub>1-4</sub>)alkoxy, -S(O)<sub>n</sub>(C<sub>1-4</sub>)alkyl where n is 0, 1 or 2 and the alkyl group is optionally substituted with fluoro, -OSO<sub>2</sub>(C<sub>1-4</sub>)alkyl where the alkyl group is optionally substituted with fluoro, cyano, nitro, C<sub>1-4</sub> alkoxy carbonyl, -CONR'R", -COR', -NR'COR" or -NR'COOR" where R' and R" are independently H or C<sub>1-4</sub> alkyl and R''' is C<sub>1-4</sub> alkyl, provided that at least one of X and Z is other than H; 25 R<sub>1</sub> is C<sub>1-4</sub> alkyl, C<sub>2-4</sub> alkenyl or C<sub>2-4</sub> alkynyl in which the alkyl, alkenyl and alkynyl groups are optionally substituted on their terminal carbon atom with one, two or 30 three substituents.

three halogen atoms, with a cyano group, with a C<sub>1-4</sub> alkylcarbonyl group, with a C<sub>1-4</sub> alkoxycarbonyl group or with a hydroxy group;

R<sub>2</sub> is H, C<sub>1-4</sub> alkyl, C<sub>1-4</sub> alkoxymethyl or benzyloxymethyl in which the phenyl ring of the benzyl moiety is optionally substituted with C<sub>1-4</sub> alkoxy;

R<sub>3</sub> and R<sub>4</sub> are independently H, C<sub>1-3</sub> alkyl, C<sub>2-3</sub> alkenyl or C<sub>2-3</sub> alkynyl provided that both are not H and that when both are other than H their combined total of carbon atoms does not exceed 4, or

R<sub>3</sub> and R<sub>4</sub> join with the carbon atom to which they are attached to form a 3 or 4 membered carbocyclic ring optionally containing one O, S or N atom and optionally substituted with halo or C<sub>1-4</sub> alkyl; and

R<sub>5</sub> is unsubstituted C<sub>3-4</sub> alkyl, unsubstituted C<sub>3-6</sub> cycloalkyl or C<sub>1-4</sub> alkyl or C<sub>3-6</sub> cycloalkyl in which the alkyl and cycloalkyl groups are substituted with halo, hydroxy, C<sub>1-6</sub> alkoxy, cyano, C<sub>1-4</sub> alkylcarbonyloxy, aminocarbonyloxy, mono- or di(C<sub>1-4</sub>)alkylaminocarbonyloxy, -S(O)<sub>n</sub>(C<sub>1-6</sub>)alkyl where n is 0, 1 or 2, triazolyl, tri(C<sub>1-4</sub>)alkylsilyloxy, optionally substituted phenoxy, optionally substituted thienyloxy, optionally substituted benzyloxy or optionally substituted thienylmethoxy, in which the optionally substituted phenyl and thienyl rings of phenoxy, thienyloxy, benzyloxy and thienylmethoxy are optionally substituted with one, two or three substituents selected from halo, hydroxy, mercapto, C<sub>1-4</sub> alkyl, C<sub>2-4</sub> alkenyl, C<sub>2-4</sub> alkynyl, C<sub>1-4</sub> alkoxy, C<sub>2-4</sub> alkenyloxy, C<sub>2-4</sub> alkynyoxy, halo(C<sub>1-4</sub>)-alkyl, halo(C<sub>1-4</sub>)alkoxy, C<sub>1-4</sub> alkylthio, halo(C<sub>1-4</sub>)alkylthio, hydroxy(C<sub>1-4</sub>)alkyl, C<sub>1-4</sub> alkoxy(C<sub>1-4</sub>)alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>3-6</sub> cycloalkyl(C<sub>1-4</sub>)alkyl, phenoxy, benzyloxy, benzoyloxy, cyano, isocyano, thiocyanato, isothiocyanato, nitro, -NR<sup>m</sup>R<sup>n</sup>, -NHCOR<sup>m</sup>, -NHCONR<sup>m</sup>R<sup>n</sup>, -CONR<sup>m</sup>R<sup>n</sup>, -SO<sub>2</sub>R<sup>m</sup>, -OSO<sub>2</sub>R<sup>m</sup>, -COR<sup>m</sup>, -CR<sup>m</sup>=NR<sup>n</sup> or -N=CR<sup>m</sup>R<sup>n</sup>, in which R<sup>m</sup> and R<sup>n</sup> are independently hydrogen, C<sub>1-4</sub> alkyl, halo(C<sub>1-4</sub>)alkyl, C<sub>1-4</sub> alkoxy, halo(C<sub>1-4</sub>)alkoxy, C<sub>1-4</sub> alkylthio, C<sub>3-6</sub> cycloalkyl, C<sub>3-6</sub> cycloalkyl(C<sub>1-4</sub>)alkyl, phenyl or benzyl, the phenyl and benzyl groups being optionally substituted with halogen, C<sub>1-4</sub> alkyl or C<sub>1-4</sub> alkoxy; and a suitable carrier or diluent therefor.

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11. A method of combating or controlling phytopathogenic fungi which comprises applying a fungicidally effective amount of a compound of the general formula (1) wherein

X, Y and Z are independently H, halogen, C<sub>1-4</sub> alkyl, halo(C<sub>1-4</sub>)alkyl, C<sub>2-4</sub> alkenyl, halo(C<sub>2-4</sub>)alkenyl, C<sub>2-4</sub> alkynyl, halo(C<sub>2-4</sub>)alkynyl, C<sub>1-4</sub> alkoxy, halo(C<sub>1-4</sub>)alkoxy, -S(O)<sub>n</sub>(C<sub>1-4</sub>)alkyl where n is 0, 1 or 2 and the alkyl group is optionally substituted with fluoro, -OSO<sub>2</sub>(C<sub>1-4</sub>)alkyl where the alkyl group is optionally substituted with fluoro, cyano, nitro, C<sub>1-4</sub> alkoxy carbonyl, -CONR'R'', -COR', -NR'COR'' or -NR'COOR''' where R' and R'' are independently H or C<sub>1-4</sub> alkyl and R''' is C<sub>1-4</sub> alkyl, provided that at least one of X and Z is other than H;

5 R<sub>1</sub> is C<sub>1-4</sub> alkyl, C<sub>2-4</sub> alkenyl or C<sub>2-4</sub> alkynyl in which the alkyl, alkenyl and alkynyl groups are optionally substituted on their terminal carbon atom with one, two or

10 three halogen atoms, with a cyano group, with a C<sub>1-4</sub> alkyl carbonyl group, with a C<sub>1-4</sub> alkoxy carbonyl group or with a hydroxy group;

R<sub>2</sub> is H, C<sub>1-4</sub> alkyl, C<sub>1-4</sub> alkoxy methyl or benzyloxymethyl in which the phenyl ring of the benzyl moiety is optionally substituted with C<sub>1-4</sub> alkoxy;

15 R<sub>3</sub> and R<sub>4</sub> are independently H, C<sub>1-3</sub> alkyl, C<sub>2-3</sub> alkenyl or C<sub>2-3</sub> alkynyl provided that both are not H and that when both are other than H their combined total of carbon atoms does not exceed 4, or

R<sub>3</sub> and R<sub>4</sub> join with the carbon atom to which they are attached to form a 3 or 4 membered carbocyclic ring optionally containing one O, S or N atom and

20 optionally substituted with halo or C<sub>1-4</sub> alkyl; and

R<sub>5</sub> is unsubstituted C<sub>3-4</sub> alkyl, unsubstituted C<sub>3-6</sub> cycloalkyl or C<sub>1-4</sub> alkyl or C<sub>3-6</sub> cycloalkyl in which the alkyl and cycloalkyl groups are substituted with halo, hydroxy, C<sub>1-6</sub> alkoxy, cyano, C<sub>1-4</sub> alkyl carbonyloxy, aminocarbonyloxy, mono- or di(C<sub>1-4</sub>)alkylaminocarbonyloxy, -S(O)<sub>n</sub>(C<sub>1-6</sub>)alkyl where n is 0, 1 or 2, triazolyl, tri(C<sub>1-4</sub>)alkylsilyloxy, optionally substituted phenoxy, optionally substituted

25 thienyloxy, optionally substituted benzyloxy or optionally substituted thienylmethoxy, in which the optionally substituted phenyl and thienyl rings of phenoxy, thienyloxy, benzyloxy and thienylmethoxy are optionally substituted with one, two or three substituents selected from halo, hydroxy, mercapto, C<sub>1-4</sub> alkyl, C<sub>2-4</sub> alkenyl, C<sub>2-4</sub> alkynyl, C<sub>1-4</sub> alkoxy, C<sub>2-4</sub> alkenyloxy, C<sub>2-4</sub> alkynyloxy, halo(C<sub>1-4</sub>)alkyl, halo(C<sub>1-4</sub>)alkoxy, C<sub>1-4</sub> alkylthio, halo(C<sub>1-4</sub>)alkylthio, hydroxy(C<sub>1-4</sub>)alkyl,

30 C<sub>1-4</sub> alkoxy(C<sub>1-4</sub>)alkyl, C<sub>3-6</sub> cycloalkyl, C<sub>3-6</sub> cycloalkyl(C<sub>1-4</sub>)alkyl, phenoxy, benzyloxy, benzyloxy, cyano, isocyano, thiocyanato, isothiocyanato, nitro, -NR'''R'', -NHCOR'', -NHCONR'''R'', -CONR'''R'', -SO<sub>2</sub>R'', -OSO<sub>2</sub>R'', -COR'',

-CR<sup>m</sup>=NR<sup>n</sup> or -N=CR<sup>m</sup>R<sup>n</sup>, in which R<sup>m</sup> and R<sup>n</sup> are independently hydrogen, C<sub>1-4</sub> alkyl, halo(C<sub>1-4</sub>)alkyl, C<sub>1-4</sub> alkoxy, halo(C<sub>1-4</sub>)alkoxy, C<sub>1-4</sub> alkylthio, C<sub>3-6</sub> cycloalkyl, C<sub>3-6</sub> cycloalkyl(C<sub>1-4</sub>)alkyl, phenyl or benzyl, the phenyl and benzyl groups being optionally substituted with halogen, C<sub>1-4</sub> alkyl or C<sub>1-4</sub> alkoxy; or a composition according to claim 10 to a plant, to a seed of a plant, to the locus of the plant or seed or to soil or any other plant growth medium.

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